

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. **(Currently Amended)** A method for reducing a number of bits representing an encoded communication signal to be transmitted from a transmitting station toward a receiving station, the method comprising:

receiving, at the transmitting station an encoded communication signal represented by a plurality of frames, where each of said frames comprises at least one frame of encoded speech signal which was encoded by a speech codec;

classifying said at least one frame signal in accordance with at least one characterization criterion selected from among a plurality of predetermined characterization criteriagroup consisting of voice and noise;

selecting a corresponding representation signal for each of said at least one frame signal, wherein the total number of bits comprised in a plurality of the selected corresponding representation signals, is less than the number of bits comprised in said encoded communication signal; and

transmitting the corresponding representation signal for each of said at least one frame signal toward the receiving station.

2. **(Original)** A method according to claim 1, wherein the step of classifying said at least one frame signal comprises classifying a number of sub-frame signals associated with said at least one frame signal, and wherein each of said sub-frame

signals is classified in accordance with an appropriate at least one characterization criterion selected from among said ~~group consisting of voice and noise~~ plurality of predetermined characterization criteria.

3. **(Original)** The method according to claim 1, wherein the step of selecting corresponding representation signals for some of said frame or sub-frame signals, comprises discarding said frame or sub-frame signals, respectively.

4. **(Original)** The method according to claim 1, wherein the step of selecting corresponding representation signals for some of said frame or sub-frame signals, comprises selecting corresponding representation signals that are essentially identical to said frame or sub-frame signals, respectively.

5. **(Original)** The method according to claim 1, wherein each of said plurality of frames is received at an equal time interval.

6. **(Original)** The method according to claim 1, wherein the corresponding representation signal of said at least one frame signal further comprises at least one information bit.

7. **(Original)** The method according to claim 6, wherein said at least one information bit comprises regeneration information to enable regeneration of said at least one frame signal out of its corresponding representation signal.

8. **(Original)** The method according to claim 6, wherein said at least one information bit comprises regeneration information to enable regeneration of a plurality of sub-frames out of their corresponding representation signals.

9. **(Original)** The method according to claim 2, wherein the corresponding representation signal of said at least one frame signal comprises a plurality of corresponding representation signals, each representing a sub-frame signal.

10. **(Original)** The method according to claim 9, wherein said corresponding representation signals further comprise a plurality of information bits associated with said plurality of corresponding representation signals.

11. **(Original)** The method according to claim 10, wherein said plurality of information bits comprise regeneration information to enable regeneration of said sub-frames out of their corresponding representation signals.

12. **(Original)** The method according to claim 1, further comprising generating at least one message where said message is not comprised within said corresponding representation signals and comprises information to enable regeneration of said at least one frame signal out of its corresponding representation signal.

13. **(Original)** The method according to claim 12, wherein said at least one message comprises information to enable regeneration of a plurality of frame signals out of their corresponding representation signals.

14. **(Original)** The method according to claim 12, wherein said at least one message comprises information to enable regeneration of a plurality of sub-frame signals out of their corresponding representation signals.

15. **(Original)** A method according to claim 1, wherein a single corresponding representation signal is selected for representing a number of frame signals.

16. **(Original)** A method according to claim 1, wherein the step of selecting comprises decoding at least one of said plurality of frames to obtain at least one decoded frame, classifying said at least one decoded frame and selecting a corresponding representation signal to representing said decoded frame.

17. **(Original)** A method according to claim 16, wherein the number of bits comprised in said selected corresponding representation signal is less than the number of bits comprised in said at least one of said plurality of frames in its encoded form.

18. **(Original)** A method according to claim 16, wherein decoding of said at least one of said plurality of frames comprises decoding at least one sub-frame comprised in said at least one of frame and obtain at least one decoded sub-frame, classifying said at least one decoded sub-frame and selected a corresponding representation signal for representing said decoded sub-frame.

19. **(Original)** A method according claim 1, wherein the step of selecting a corresponding representation signal comprises comparing at least one bit of at least one frame signal out of said plurality of frame signals with a pre-defined code list, and selecting a code to represent said at least one frame signal.

20. **(Original)** A method according to claim 2, wherein the step of selecting a corresponding representation signal comprises comparing at least one bit of at least one sub-frame with a pre-defined code list, and selecting a code to represent said at least one sub-frame signal.

21. **(Original)** A method according claim 1, wherein the step of selecting a corresponding representation signal comprises applying a mathematical algorithm to at least one bit of the at least one frame signal and retrieving thereby a code for representing said at least one frame signal.

22. **(Original)** A method according to claim 2, wherein the step of selecting a corresponding representation signal comprises applying a mathematical algorithm on at least one bit of at least one sub-frame and retrieving thereby a code to represent said at least one sub-frame signal.

23. **(Original)** The method according to claim 22, wherein the code retrieved represents an entire frame signal of which said at least one sub-frame signal is part of.

24. **(Original)** The method according to claim 1 and also comprising:

 generating reconstruction bits for at least some of the selected corresponding representation signals so as to enable the regeneration of the corresponding frame signals.

25. **(Original)** The method according to claim 2 and also comprising:

generating reconstruction bits for at least some of the selected
corresponding representation signals thereof so as to enable regeneration of their
corresponding sub-frame signals.

26. **(Original)** The method according to claim 24, wherein said
reconstruction bits represent bits that are not included in said selected corresponding
representation signals.

27. **(Original)** The method according to claim 24, wherein said generating
step comprises generating reconstruction bits which comply with spectral
characteristics and energy characteristics of the signal received in its encoded form.

28. **(Original)** The method according to claim 24, further comprising
generating at least part of the reconstruction bits from parameters generated by a
compressing device operative to transmit said selected corresponding representation
signals.

29. **(Original)** The method according to claim 1, further comprising a step of
transmitting said selected corresponding representation signals along a communication
path extending between a transmitting end and a receiving end.

30. **(Original)** The method according to claim 29, wherein said step of transmitting is carried out in response to determining that a communication activity level along said communication path exceeds a pre-defined activity threshold level.

31. **(Currently Amended)** The method according to claim ~~54~~⁵⁴¹, wherein said encoded communication signal comprises an encoded speech signal.

32. **(Currently Amended)** The method according to claim ~~31~~³¹², wherein ~~a frame signal or a sub-frame signal~~ is classified as being voice signal ~~frame or sub-frame~~ respectively, or as a noise signal ~~frame or sub-frame~~, respectively.

33. **(Original)** The method according to claim 32, wherein said frame signal or sub-frame signal classified as being a voice signal is further characterized as being a stationary frame or sub-frame signal respectively, or a transition frame or sub-frame signal respectively, that comprises a change in phonemes.

34. **(Original)** The method according to claim 32, wherein said frame signal or sub-frame signal classified as being a noise signal is further characterized as being a silence frame or sub-frame signal respectively, or a background noise frame or sub-frame signal respectively.

35. **(Original)** The method according to claim 1, wherein the encoded communication signal comprises an encoded video signal.

36. **(Original)** The method according to claim 35, wherein a frame signal or a sub-frame signal of said encoded video signal is further characterized as a frame or sub-frame, respectively, as a frame or sub-frame with a rapid/slow change in respect of the respective preceding frame or sub-frame, or as a frame or sub-frame with a rapid/slow change in respect of pixels in that frame or sub-frame, respectively.

37. **(Original)** The method according to claim 1, wherein the encoded communication signal comprises a combination of an encoded speech signal and an encoded video signal.

38. - 40. **(Cancelled)**

40. **(Original)** The method according to claim 39 and wherein said first bit-rate and said second bit-rate are selected from the following bit-rates such that the second bit-rate is maintained lower than the first bit-rate: 12.2kbit/s; 10.2kbit/s; 7.95kbit/s; 7.40kbit/s; 6.70kbit/s; 5.90kbit/s; 5.15kbit/s; and 4.75kbit/s.

41. **(Currently Amended)** ~~An Apparatus adapted for reducing a number of communicated bits to be transmitted from a transmitting station toward a receiving station and comprising:~~

a receiver ~~operative to that~~ receives an encoded communication signal ~~from a speech codec~~, the encoded communication signal being represented by a plurality of frames, where each of said frames comprises at least one frame signal;

a processor ~~operatively that is~~ associated with the receiver and ~~operative to classify classifies~~ each of said at least one frame signal in accordance with at least one characterization criterion selected from ~~a group consisting of voice and noise among a plurality of predetermined characterization criteria~~, and ~~to select~~s a corresponding representation signal representing each of said at least one frame signal; and

a transmitter ~~operative to that~~ transmit the selected corresponding representations signals; ~~received from said processor toward the receiving station~~, wherein the number of bits transmitted of the selected corresponding representation signals is less than the number of bits of the encoded communication signal received.

42. **(Original)** The apparatus according to claim 41 adapted to operate in a cellular communication network.

43. **(Original)** The apparatus according to claim 42 and wherein said cellular communication network comprises a Global System for Mobile communications (GSM) network.

44. **(Currently amended)** The apparatus according to claim 41 adapted to operate ~~as in association with~~ one of the following: a base transceiver station (BTS); and a base station controller (BSC).

45. **(Original)** The apparatus according to claim 41 and wherein said processor is also operative to generate, for at least some of the selected corresponding representations signals, regeneration bits which enable regenerating, approximately or identically, of non-transmitted bits of said at least some of the frame signals, and said transmitter is also operative to transmit said regeneration bits together with transmitted bits of the selected corresponding representations signals.

46. **(Original)** The apparatus according to claim 45 and wherein said processor is operative to generate the regeneration bits so as to comply with spectral characteristics and energy characteristics of an input signal from which said encoded communication signal was generated.

47. **(Original)** The apparatus according to claim 45, and wherein the processor is also operative to detect a communication activity level along a communication path extending between a first end and a second end, and wherein said transmitter is adapted to transmit said regeneration bits together with transmitted bits of the selected corresponding representations signals in response to a determination that the communication activity level exceeds a pre-defined activity threshold level.

48. **(Original)** The apparatus according to claim 41, and wherein the encoded communication signal comprises a compressed speech signal.

49. **(Original)** The apparatus according to claim 41, and wherein the encoded communication signal comprises a compressed video signal.

50. **(Original)** The apparatus according to claim 41 and wherein the encoded communication signal comprises a combination of a compressed speech signal and a compressed video signal.

51. - 53. **(Cancelled)**

54. **(New)** A method for reducing a number of bits representing an encoded communication signal to be transmitted from a transmitting station toward a receiving station, the method comprising:

 receiving, at the transmitting station an encoded communication signal represented by a plurality of frames, where each of said frames comprises at least one frame signal;

 classifying said at least one frame signal in accordance with at least one characterization criterion selected from among a plurality of predetermined characterization criteria, the step of classifying said at least one frame signal comprises classifying a number of sub-frame signals associated with said at least one frame signal, and wherein each of said sub-frame signals is classified in accordance with an appropriate at least one characterization criterion selected from among said plurality of predetermined characterization criteria;

 selecting a corresponding representation signal for each of said at least one frame signal, wherein the total number of bits comprised in a plurality of the selected corresponding representation signals, is less than the number of bits comprised in said encoded communication signal; and

 transmitting the corresponding representation signal for each of said at least one frame signal toward the receiving station.

55. **(New)** An apparatus for reducing a number of communicated bits to be transmitted from a transmitting station toward a receiving station and comprising:

a receiver that receives an encoded communication signal, the encoded communication signal being represented by a plurality of frames, where each of said frames comprises at least one frame signal;

a processor that is associated with the receiver and classifies each of said at least one frame signal in accordance with at least one characterization criterion selected from among a plurality of predetermined characterization criteria, and selects a corresponding representation signal representing each of said at least one frame signal; and

a transmitter that transmit the selected corresponding representations signals received from said processor toward the receiving station, wherein the number of bits transmitted of the selected corresponding representation signals is less than the number of bits of the encoded communication signal received,

wherein said processor is also operative to generate, for at least some of the selected corresponding representations signals, regeneration bits which enable regenerating, approximately or identically, of non-transmitted bits of said at least some of the frame signals, and said transmitter is also operative to transmit said regeneration bits together with transmitted bits of the selected corresponding representations signals.